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MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

(A Constituent Institution of MAHE, Manipal)

OPE EXAMINATIONS, March 2021

SUBJECT: INDUSTRIAL POLLUTION CONTROL [CHE-4301]

REVISED CREDIT SYSTEM

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer **ALL** the questions.
- ❖ Missing data may be suitable assumed.

1A.	With the help of a neat flow diagram, explain the bio-medical waste management.	3
1B.	Write the functions of the central board of air pollution prevention and control.	3
1C.	What are various types of e-wastes? Explain about the process of recycling of e-wastes.	4
2A.	What are the various effects of hazardous medical waste? Explain.	3
2B.	Explain the design of a landfill with the help of a neat diagram.	4
2C.	Describe in detail about any three measures that you have taken in controlling any kind of pollution in your community.	3
3A.	Explain each method for removal of solid waste in brief.	3
3B.	Explain any four tertiary wastewater treatment processes.	4
3C.	Write about various types of water pollution? Explain in detail about any two effects of land pollution.	3
4A.	Clearly explain Carbon and Nitrogen cycles with the help of neat diagrams.	4
4B.	Explain about the steps that need to be followed in controlling hazardous waste.	3
4C.	What is OSHA method? Explain. How do you analyze O ₃ in air?	3
5A.	Explain about any two methods for the removal of Mercury from gases with the help of a neat diagram.	3
5B.	Explain about design of wastewater treatment plant. Write about the necessity and principle of settling in water treatment process.	4
5C.	Explain the activated sludge process, with the help of a neat flow diagram	3